

SEQUENCE LISTING

<110> Flavell et al.

<120> IRAK-M IS A NEGATIVE REGULATOR OF TOLL-LIKE RECEPTOR SIGNALING

<130> YU-P01-011

<140> 10/340545

<141> 2003-01-09

<150> 60/348176

<151> 2002-01-09

<160> 28

<170> PatentIn version 3.2

<210> 1

<211> 1888

<212> DNA

<213> Mus musculus

<400> 1

```

aaaggcgggtg acagcggcga cctccctgct tctctgcgtg ggggcccggg actccgcgat      60
ggccggccgg tgccggggccc gtggcgcgct gtgccacag ttgctgctct tcgacctgcc      120
gcccgcaactg ctgggagagc tttgcgggat cctggacagc tgggatggcc cgctcggctg      180
gtggggcctg gcggagcgcac tttcaaacag ctggctggat gttcgtcata ttgaaaagta      240
cctaaccacaa ggtaaaagtg gaacaagaga attgctctgg tcctgggcac agaaaaacaa      300
aacgatcggc gaccttttag aggttctcca ggacatgggg catcaacgag ctatccactt      360
aatcatcaac tatggagtaa gctggactcc ttcagtgcag acgcatcacg agcttccatt      420
ccccagcttc ccacttgagg tgaagcatgc gtgcagagaa aacgaccctg gacctctgga      480
accagccaat gtcacaatgg ataatgttct tgttcctgaa cataatgaaa aaggaacact      540
gcagaaaacc cctatcagct tccagagtat cctagaagga accaaacatt tccacaaaga      600
cttcctgatt ggagaagggg agatattcga agtatacaga gtggacattc gaaaccaagc      660
atatgctgtt aaattgttta aacaggagaa aaaaatgcaa ctaaagaagc actggaagag      720
atTTTTatca gaactggaag ttctactcct gttccgtcac cccacatac tagagctggc      780
tgcatatttc acagagactg agaaactttg tctggtttat ccctatatga gcaacgggac      840
gcttttcgac agattacagt gcacaaatgg cacaaccccg ctttcctggc acgttcgaat      900
caacgtattg ataggaatag ccaaagccat ccaatacttg cacaacactc agccgtgcgc      960
cgatcatctgt ggcaacgttt ccagtcaaaa catactcttg gatgaccagc tccaacccaa     1020
actaacggat tttgctgcag cgcacttccg acccaatcta gagcagcaga gttctacat     1080
aaatatgacc ggcggtggca ggaaacatct gtggtacatg ccagaagaat acatcagaca     1140

```

```

gggaagactt tccgttaaaa ctgatgtcta cagcttcgga atcgtgatca tggaggttct 1200
aacgggctgc aaagtgggtgc tggatgaccc gaaacacggt cagctgcggg acctcctcat 1260
ggaactgatg gagaaaagag gcctagactc ctgcctgtcc ttcttagaca ggaagatacc 1320
accctgtcct cggaacttct ctgcaaagct cttctctctg gcggggccggt gtgtggcaac 1380
gaaggccaag ttaagacca cgatggacga agtcctgtcc tctctggaga gcaccagcc 1440
tagcttgat tttgcagaag acctccccc gtccttgaag tccttcaggt gtccttctcc 1500
actgttcttg gataatgtcc caagtattcc agtagaagat gatgaaaacc agaataacca 1560
ttcagtacct cccaaggaag ttttggggac agatagagtg actcagaaaa cccctttga 1620
atgcagccag tctgaggtca ctttcttagg cttggaccga aacagaggga acaggggaag 1680
tgaagcggat tgcaacgtgc ccagttcttc tcatgaggaa tgctggtccc cagagcttgt 1740
ggcgccatcc caggacttaa gtcctactgt gatcagtttg ggctcgtctt gggaagtacc 1800
aggccattct tatgggagca agccaatgga gaagaggtgt tcctctgggc tcttttgcag 1860
tgagcatgaa cagtccaaaa agcagtga 1888

```

```

<210> 2
<211> 609
<212> PRT
<213> Mus musculus

```

```

<400> 2

```

```

Met Ala Gly Arg Cys Gly Ala Arg Gly Ala Leu Ser Pro Gln Leu Leu
1          5          10          15

```

```

Leu Phe Asp Leu Pro Pro Ala Leu Leu Gly Glu Leu Cys Gly Ile Leu
20          25          30

```

```

Asp Ser Trp Asp Gly Pro Leu Gly Trp Trp Gly Leu Ala Glu Arg Leu
35          40          45

```

```

Ser Asn Ser Trp Leu Asp Val Arg His Ile Glu Lys Tyr Leu Asn Gln
50          55          60

```

```

Gly Lys Ser Gly Thr Arg Glu Leu Leu Trp Ser Trp Ala Gln Lys Asn
65          70          75          80

```

```

Lys Thr Ile Gly Asp Leu Leu Glu Val Leu Gln Asp Met Gly His Gln
85          90          95

```

```

Arg Ala Ile His Leu Ile Ile Asn Tyr Gly Val Ser Trp Thr Pro Ser
100          105          110

```

Val Gln Thr His His Glu Leu Pro Phe Pro Ser Phe Pro Leu Glu Val
 115 120 125

Lys His Ala Cys Arg Glu Asn Asp Pro Gly Pro Leu Glu Pro Ala Asn
 130 135 140

Val Thr Met Asp Asn Val Leu Val Pro Glu His Asn Glu Lys Gly Thr
 145 150 155 160

Leu Gln Lys Thr Pro Ile Ser Phe Gln Ser Ile Leu Glu Gly Thr Lys
 165 170 175

His Phe His Lys Asp Phe Leu Ile Gly Glu Gly Glu Ile Phe Glu Val
 180 185 190

Tyr Arg Val Asp Ile Arg Asn Gln Ala Tyr Ala Val Lys Leu Phe Lys
 195 200 205

Gln Glu Lys Lys Met Gln Leu Lys Lys His Trp Lys Arg Phe Leu Ser
 210 215 220

Glu Leu Glu Val Leu Leu Leu Phe Arg His Pro His Ile Leu Glu Leu
 225 230 235 240

Ala Ala Tyr Phe Thr Glu Thr Glu Lys Leu Cys Leu Val Tyr Pro Tyr
 245 250 255

Met Ser Asn Gly Thr Leu Phe Asp Arg Leu Gln Cys Thr Asn Gly Thr
 260 265 270

Thr Pro Leu Ser Trp His Val Arg Ile Asn Val Leu Ile Gly Ile Ala
 275 280 285

Lys Ala Ile Gln Tyr Leu His Asn Thr Gln Pro Cys Ala Val Ile Cys
 290 295 300

Gly Asn Val Ser Ser Ala Asn Ile Leu Leu Asp Asp Gln Leu Gln Pro
 305 310 315 320

Lys Leu Thr Asp Phe Ala Ala Ala His Phe Arg Pro Asn Leu Glu Gln
 325 330 335

Gln Ser Ser Thr Ile Asn Met Thr Gly Gly Gly Arg Lys His Leu Trp
 340 345 350

Tyr Met Pro Glu Glu Tyr Ile Arg Gln Gly Arg Leu Ser Val Lys Thr
 355 360 365

Asp Val Tyr Ser Phe Gly Ile Val Ile Met Glu Val Leu Thr Gly Cys
 370 375 380

Lys Val Val Leu Asp Asp Pro Lys His Val Gln Leu Arg Asp Leu Leu
 385 390 395 400

Met Glu Leu Met Glu Lys Arg Gly Leu Asp Ser Cys Leu Ser Phe Leu
 405 410 415

Asp Arg Lys Ile Pro Pro Cys Pro Arg Asn Phe Ser Ala Lys Leu Phe
 420 425 430

Ser Leu Ala Gly Arg Cys Val Ala Thr Lys Ala Lys Leu Arg Pro Thr
 435 440 445

Met Asp Glu Val Leu Ser Ser Leu Glu Ser Thr Gln Pro Ser Leu Tyr
 450 455 460

Phe Ala Glu Asp Pro Pro Thr Ser Leu Lys Ser Phe Arg Cys Pro Ser
 465 470 475 480

Pro Leu Phe Leu Asp Asn Val Pro Ser Ile Pro Val Glu Asp Asp Glu
 485 490 495

Asn Gln Asn Asn His Ser Val Pro Pro Lys Glu Val Leu Gly Thr Asp
 500 505 510

Arg Val Thr Gln Lys Thr Pro Phe Glu Cys Ser Gln Ser Glu Val Thr
 515 520 525

Phe Leu Gly Leu Asp Arg Asn Arg Gly Asn Arg Gly Ser Glu Ala Asp
 530 535 540

Cys Asn Val Pro Ser Ser Ser His Glu Glu Cys Trp Ser Pro Glu Leu
 545 550 555 560

Val Ala Pro Ser Gln Asp Leu Ser Pro Thr Val Ile Ser Leu Gly Ser
 565 570 575

Ser Trp Glu Val Pro Gly His Ser Tyr Gly Ser Lys Pro Met Glu Lys
 580 585 590

Arg Cys Ser Ser Gly Leu Phe Cys Ser Glu His Glu Gln Ser Lys Lys
595 600 605

Gln

<210> 3
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 3
cctatatgag caacgggacg ctt 23

<210> 4
<211> 62
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 4
cggaattcgc caccatggac tacaaagacg atgacgacaa gatggcgggg aactgtgggg 60
cc 62

<210> 5
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 5
ttattctttt ttgtactgtt catattc 27

<210> 6
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 6
accatggact acaaagacga tgacgacaag atggacgcc tggagccgc cgac 54

<210> 7
<211> 30
<212> DNA

<213> Artificial Sequence
 <220>
 <223> primer
 <400> 7
 tcagctctga aattcatcac tttcttcagg 30

<210> 8
 <211> 54
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> primer
 <400> 8
 accatggact acaaagacga tgacgacaag atggcctgct acatctacca gctg 54

<210> 9
 <211> 28
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> primer
 <400> 9
 ttatgtaaca tcctggggag gctccagg 28

<210> 10
 <211> 23
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> primer
 <400> 10
 gccagtggaa agtgatgaga gtg 23

<210> 11
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> primer
 <400> 11
 gaaaaagcct gatgacagca gttg 24

<210> 12
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> primer

 <400> 12
 tccttcaggt gtccttctcc actg 24

 <210> 13
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 13
 cctcttctcc attggcttgc tc 22

 <210> 14
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 14
 gttgataca ggccagactt tgttg 25

 <210> 15
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer

 <400> 15
 gagggtaggc tggcctatag gct 23

 <210> 16
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> phosphorothioate-modified CpG oligo DNA

 <400> 16
 tccatgacgt tctgacgtt 20

 <210> 17
 <211> 21
 <212> PRT
 <213> Mus musculus

<400> 17

Gly Glu Gly Glu Ile Phe Glu Val Tyr Arg Val Asp Ile Arg Asn Gln
1 5 10 15

Ala Tyr Ala Val Lys
20

<210> 18

<211> 6

<212> PRT

<213> Mus musculus

<400> 18

Asn Val Ser Ser Ala Asn
1 5

<210> 19

<211> 21

<212> PRT

<213> Homo sapiens

<400> 19

Gly Glu Gly Glu Ile Phe Glu Val Tyr Arg Val Glu Ile Gln Asn Leu
1 5 10 15

Thr Tyr Ala Val Lys
20

<210> 20

<211> 6

<212> PRT

<213> Homo sapiens

<400> 20

Ser Ile Ser Ser Ala Asn
1 5

<210> 21

<211> 21

<212> PRT

<213> Homo sapiens

<400> 21

Gly Glu Gly Gly Phe Gly Cys Val Tyr Arg Ala Val Met Arg Asn Thr
1 5 10 15

Val Tyr Ala Val Lys
20

<210> 22
<211> 6
<212> PRT
<213> Homo sapiens

<400> 22

Asp Ile Lys Ser Ser Asn
1 5

<210> 23
<211> 21
<212> PRT
<213> Homo sapiens

<400> 23

Ser Gln Gly Thr Phe Ala Asp Val Tyr Arg Gly His Arg His Gly Lys
1 5 10 15

Pro Phe Val Phe Lys
20

<210> 24
<211> 6
<212> PRT
<213> Homo sapiens

<400> 24

Asn Val Lys Ser Ser Asn
1 5

<210> 25
<211> 21
<212> PRT
<213> Drosophila melanogaster

<400> 25

Gly Gln Gly Gly Phe Gly Asp Val Tyr Arg Gly Lys Trp Lys Gln Leu
1 5 10 15

Asp Val Ala Ile Lys
20

<210> 26
<211> 6
<212> PRT
<213> Drosophila melanogaster

<400> 26

Asp Ile Lys Pro Ala Asn

```

1                5

<210>  27
<211>  21
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  conserved kinase domain motif

<220>
<221>  misc_feature
<222>  (2)..(2)
<223>  Xaa can be any naturally occurring amino acid

<220>
<221>  misc_feature
<222>  (4)..(5)
<223>  Xaa can be any naturally occurring amino acid

<220>
<221>  misc_feature
<222>  (7)..(7)
<223>  Xaa can be any naturally occurring amino acid

<220>
<221>  misc_feature
<222>  (9)..(20)
<223>  Xaa can be any naturally occurring amino acid

<400>  27

Gly Xaa Gly Xaa Xaa Gly Xaa Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1                5                10                15

Xaa Xaa Xaa Xaa Lys
                20

<210>  28
<211>  6
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  conserved kinase domain motif

<400>  28

Asp Leu Lys Pro Ala Asn
1                5

```